# *K-12 Curriculum*

# *and*

# *Integrated*

# *Information and Technology*

# *Literacy Skills*

Component Checklist
Process/Performance Goals
Skills Matrix
Activities

## *INFORMATION AND TECHNOLOGY LITERACY: A COMPANION TO THE SHOW-ME STANDARDS*

A committee was formed to address integrating information and technology skills into all areas of the process / performance standards and content / knowledge standards of the Show-Me Standards. The committee consisted of the following people.


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# Component

# Checklist

## (developed first)

## Introduction to Component Checklist

The component checklist was developed to assist the library media specialist in curriculum planning to integrate essential information and technology literacy skills both the Show-Me Process / Performance Standards and Content / Knowledge Standards. This component checklist further details the generalized statements on the Process / Performance Standards listing.

The checklist may also be useful in planning with classroom teachers. It is arranged to be a guide throughout the research process.

### COMPONENTS

**Access to Information**

**Evaluation and Selection of Information**

**Utilization of Information**

**Social Responsibility Regarding Information**

**Independent Learning**

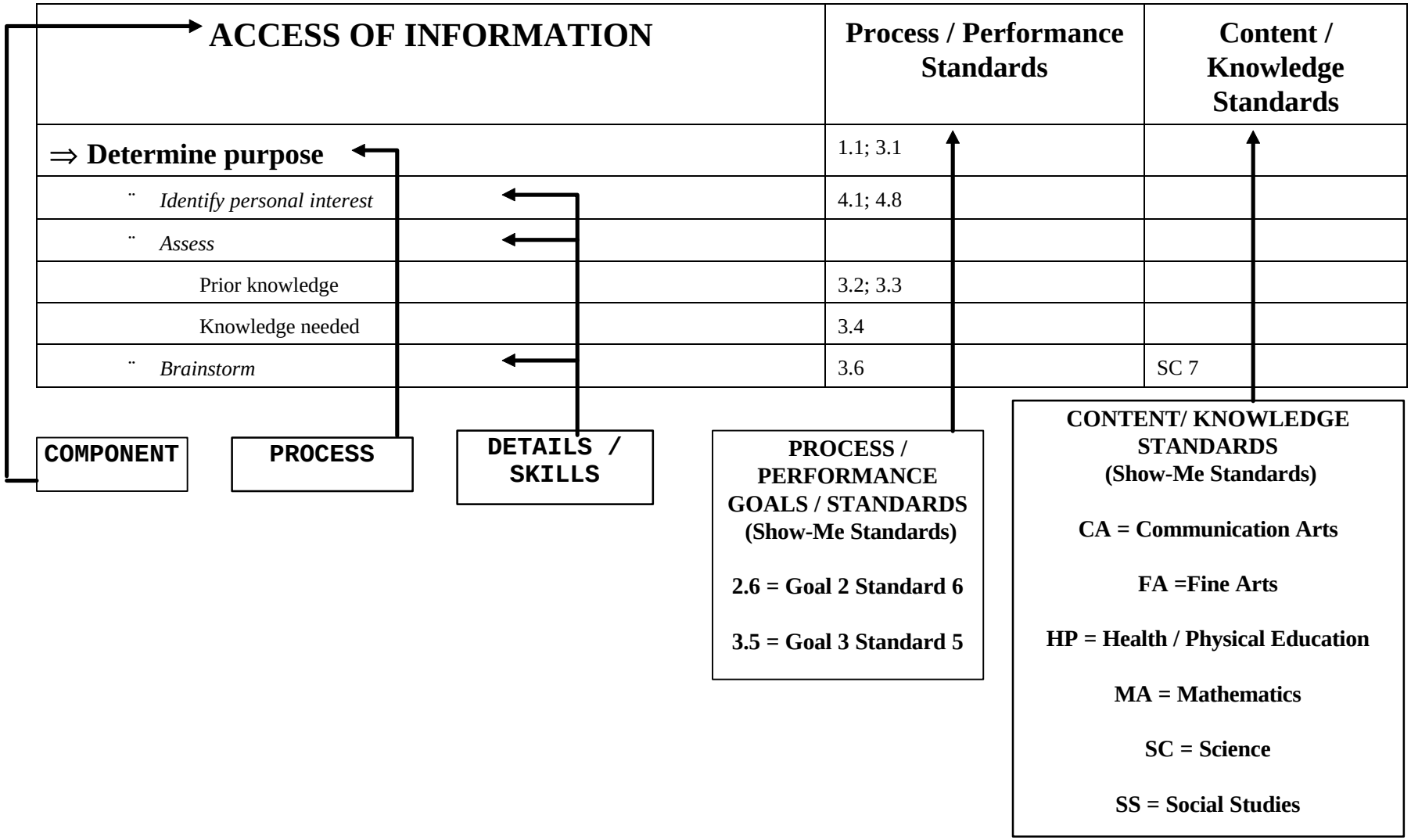
**Reading Literacy**

**NOTE TO READERS**

The Show-Me Process / Performance and Content / Knowledge Standards are identified numerically in separate columns.
**CODES** :

**1.6 = Process / Performance Goal 1 -- Standard number 6.**

**MA4 = Content / Knowledge area Mathematics -- Standard number 4**


ACCESS OF INFORMATION
Process / Performance Standards
Content / Knowledge Standards
⇒ Determine purpose
1.1; 3.1
¨ Identify personal interest
4.1; 4.8
¨ Assess
Prior knowledge
3.2; 3.3
Knowledge needed
3.4
¨ Brainstorm
3.6
SC 7
COMPONENT
PROCESS
DETAILS / SKILLS
PROCESS / PERFORMANCE GOALS / STANDARDS (Show-Me Standards)
2.6 = Goal 2 Standard 6
3.5 = Goal 3 Standard 5
CONTENT/ KNOWLEDGE STANDARDS (Show-Me Standards)
CA = Communication Arts
FA =Fine Arts
HP = Health / Physical Education
MA = Mathematics
SC = Science
SS = Social Studies

| COMPONENTS OF INFORMATION AND TECHNOLOGY LITERACY | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| | | |
| **ACCESS OF INFORMATION** | | |
| **⇒ Determine purpose** | 1.1; 3.1 | |
| ¨ *Identify personal interest* | 4.1; 4.8 | |
| ¨ *Assess* | | |
| Prior knowledge | 3.2; 3.3 | |
| Knowledge needed | 3.4 | |
| ¨ *Brainstorm* | 3.6 | SC 7 |
| **⇒ Determine procedures/ongoing evaluation** | 1.1; 3.4; 3.7; 4.5; 4.6 | SC 7 |
| ¨ *Circulation procedures* | | |
| ¨ *Discipline / behavior expectations* | | |

| COMPONENTS OF INFORMATION AND TECHNOLOGY LITERACY | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| ⇒ **Access leisure/information resources** | 1.2; 1.4; 1.6 | CA 1-7; FA 1-5; HP 1-7; MA 1-6; SC 1-8; SS 1-7 |
| ¨ *Consider variety of resources*<br>**choose formats that apply; not all will be used in every situation* | 1.2; 1.4; 1.6 | CA 1-7; FA 1-5; HP 1-7; MA 1-6; SC 1-8; SS 1-7 |
| Print format | | |
| fiction | | |
| magazines / periodicals / newspapers (electronic / paper presentation) | | |
| non-fiction | | |
| professional materials | | |
| reference (electronic and paper presentation) | | |
| Non-print format | | |
| art prints / photos / slides / transparencies | | FA 5 |
| audio tapes / recordings / compact disks | | |
| computer-based / multimedia resources | | |
| compact disks | | |
| electronic mail (e-mail) | | |
| software / CD-ROM's | | |
| laser disks | | |

| COMPONENTS OF INFORMATION AND TECHNOLOGY LITERACY | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| live television broadcasts | | |
| maps / globes / land surveys | | SS 5; SS 7 |
| models / kits / manipulatives | | |
| personal interviews | | |
| video tapes (commercial / student produced) | | |
| diagrams / charts / graphs | | MA 3 |
| Þ **Locate materials** | 1.2; 1.4; 1.6; 3.3 | CA 1-7; FA 1-5; HP 1-7; MA 1-6; SC 1-8; SS 1-7 |
| ¨ *Browse* | | |
| ¨ *Use automated / print card catalog* | | |

| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| **EVALUATION AND SELECTION OF INFORMATION** | 1.1; 1.2; 1.4; 1.5; 1.6; 3.5; 3.7; 4.1 | CA 2; CA 3; CA 5; CA 6; SC 7 |
| **⇒ Individual interests / relevance to need** | | |
| **⇒ Readability / ease of use** | | |
| **⇒ Pattern and relationship** | | |
| ¨ *Layout / organization of material* | | |
| preface / forward / introduction | | |
| table of contents | | |
| index | | |
| glossary | | |
| charts / graphs / illustrations | | MA 3 |
| tutorials / users' guides | | |
| bibliography / additional resource lists | | |
| screen prompts | | |
| **⇒ Copyright and timeliness** | 1.7 | |

| COMPONENTS OF INFORMATION AND TECHNOLOGY LITERACY | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| ⇒ **Source of information** | 1.7 | CA 7; FA 5; HP 6; SS 6 |
| ¨ *Primary (first hand report)* | 3.2 | |
| ¨ *Secondary* | | |
| ⇒ **Reliability / authority** | 1.7 | CA 7; FA 5; HP 6; SS 6 |
| ⇒ **Diversity (multiculture)** | 1.7 | CA 7; FA 5; HP 6; SS 6 |
| ⇒ **Bias / prejudice** | 1.7 | CA 7; FA 5; HP 6; SS 6 |
| ⇒ **Fact / opinion** | 1.7 | CA 7; FA 5; HP 6; SS 6 |
| ⇒ **Depth of coverage** | | |

| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| **UTILIZATION OF INFORMATION** | 1.2; 1.4; 1.10; 2.1 | |
| **⇒ Extract and organize** | 1.5; 1.8; 4.4 | CA 2; CA 3 |
| ¨ *Skimming and reading* | | |
| ¨ *Outlining / webbing / classifying / prioritizing* | | CA 1; CA 4; FA 3 |
| ¨ *Taking notes* | | CA 4; FA 3 |
| ¨ *Paraphrasing / summarizing* | | CA 1; CA 4; FA 3 |
| ¨ *Bibliographic information (citing sources)* | | CA 4 |
| **⇒ Determine presentation method (including but not limited to)** | 1.8; 2.5; 2.7; 3.7; 3.8; 4.5; 4.6 | CA 5; CA 6; FA 1; FA 2 |
| ¨ *Artistic products (posters; mobiles; computer graphics; models)* | | |
| ¨ *Electronic products / computer programs (video / audio reports; spreadsheets; databases; word processing; presentation software; desktop publishing; web pages; telecommunications; charts; graphs)* | | MA 1; MA 3; MA 6; SC 8 |
| ¨ *Graphic organizers (timeline; list; table; schematic drawing; charts; graphs; flowchart; map)* | | FA 4; FA 5; MA 1; MA 3; MA 6; SC 7; SS 7 |
| ¨ *Individual and groups presentations (demonstrations; teach a lesson; persuasive speech; role playing; panel discussion; theatrical production; character portrayal; commercials)* | | FA 3; HP 6 |
| ¨ *Multimedia products (combined media)* | | SC 8 |
| ¨ *Portfolios (collection of works)* | | |

| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| ¨ *Technical writing forms and technical products (reports; scale drawings; surveys; manuals; mathematical models; inventions; charts; graphs)* | | FA 4; FA 5; MA 1; MA 2; MA 3; MA 6; SS 7 |
| ¨ *Written forms (report; letter to the editor; sales or travel brochure; itinerary; script; law or policy; news story; captions)* | | CA 1; CA 4 |
| **⇒ Communicate** | 1.5; 1.8; 2.3; 2.6; 2.7; 4.1; 4.5 | CA 1; CA 4 |
| ¨ *Write / create* | 2.1 | |
| ¨ *Revise / edit* | 1.1; 2.2 | |
| ¨ *Present completed product* | 2.4; 2.5; | CA 6; FA 1 |
| **⇒ Evaluate student process and product** | 1.5; 2.2; 2.3; 3.4; 3.7; 3.8 | |
| ¨ *Students (self-evaluation)* | | CA 5 |
| ¨ *Peer evaluation* | | CA 5 |
| ¨ *Teaching partners evaluation team (teacher and library media specialist) It is essential the teacher and library media specialist complete a self-evaluation of the process and the product.* | | |

| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| **SOCIAL RESPONSIBILITY REGARDING INFORMATION** | | |
| **⇒ Recognize importance of information in society** | | |
| ¨ *Seek information from diverse sources; contexts; disciplines; and cultures* | 1.9; 4.1 | |
| ¨ *Respect the principle of equitable access* | | |
| **⇒ Practice ethical behavior** | 4.4 | |
| ¨ *Adhere to policies and procedures* | 4.5 | |
| ¨ *Respect the principles of intellectual freedom* | 4.2 | |
| ¨ *Respect intellectual property rights* | 4.2 | |
| ¨ *Use information technology responsibly* | 4.2 | |

| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| ⇒ **Work cooperatively to pursue and generate information** | 4.6 | |
| ¨ *Share knowledge and information* | 4.3 | |
| ¨ *Respect others' ideas and backgrounds acknowledges their contribution* | 4.3 | |
| ¨ *Collaborate with others* | 4.6 | |
| ¨ *Identify information problems and seek solutions* | | |
| ¨ *Design; develop; and evaluate information products and solutions* | | |
| | | |
| | | |
| **INDEPENDENT LEARNING** | | |
| ⇒ **Pursue personal interest information (career interests; health; recreational; etc.)** | 1.3; 1.10; 2.6; 4.7; 4.8 | |
| ⇒ **Analyze; interpret; and use creative expressions of information (literature; drawing; drama; etc.)** | 2.4; 2.5 | |
| ¨ *Derive meaning from information in a variety of formats* | 1.5 | |
| ¨ *Develop creative products in a variety of formats* | 2.5 | |

| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| **READING LITERACY** | 1.5; 1.10 | CA 2; CA 5; CA 7 |
| | | |
| The following is a sampling of ideas to promote an appreciation of literature and reading. Please do not limit yourself to this list. Be creative!!! | | |
| Book Talk : A brief; motivational presentation to entice the reader. | | |
| Book Review : An evaluation of a book by students or adults. | | |
| Oral Reading : Reading aloud to groups (may include peer reading) | | |
| Storytelling : Creative oral presentation. | | |
| Model Reading : Adults reading in presence of students. | | |
| Daily Reading Programs : SSR (Silent Sustained Reading); DEAR (Drop Everything and Read); DIRT (Daily Individual Reading Time); etc. | | |
| Guest Readers : Reading by local celebrity; grandparents; school personnel (nurse /custodian; etc.); community members; etc.. | | |
| Special Programs : Author visits; read-ins (sleep-overs / lock-ins); discussion groups. | | |
| Book Pass : Students or teachers examine a pre-selected book for 60 seconds or less; decide if they are interested in reading it; mark their check list; then pass the book to the next person for their examination. | | |
| Book Displays | | |
| Book Fairs / Book Swaps | | |

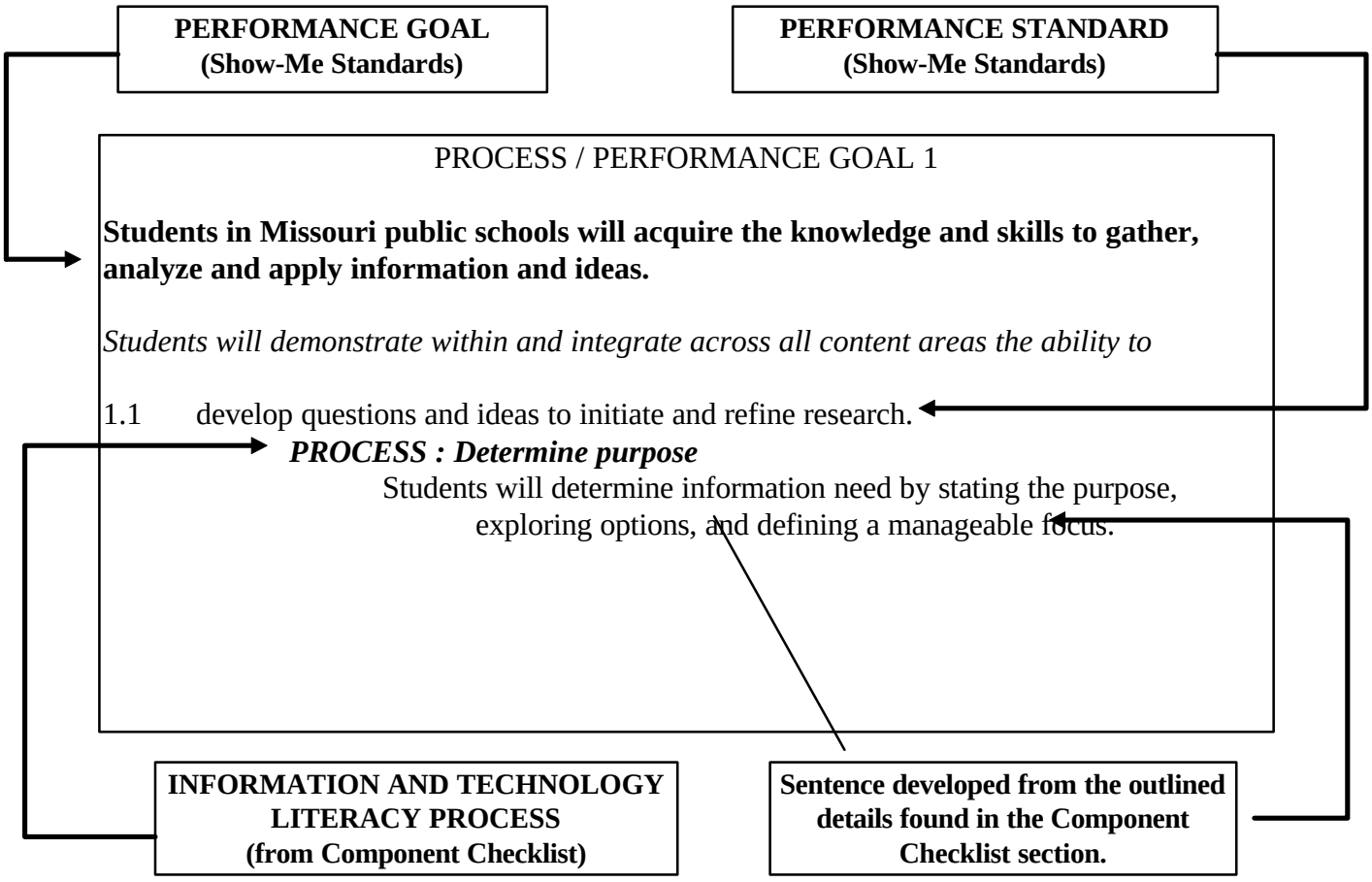
| | PROCESS / PERFORMANCE STANDARDS | CONTENT / KNOWLEDGE STANDARDS |
|---|---|---|
| Visual Literacy : Use a wordless picture book to tell or write a story. Could include rebus books. | | |
| Bibliographies : A list of special interest selections. | | |
| Media Tie-Ins : Emphasizing connections between television; movies; newspapers; instructional television; etc. and a book. | | |
| Role Playing : Acting the part of a character in a book. | | |
| Character / Author Dress-up Day | | |
| Bulletin Board Displays; etc. : Feature a variety of student and teacher recommendations and projects. | | |
| Holiday / Special Observance Tie-Ins | | |
| Cross Curricular thematic units : May include art; music; physical education | | |
| Computerized Reading Programs : Battle of the Books; Accelerated Reader; Electronic Book Shelf; etc. | | |
| Contests : Trivia; book marks; book covers; etc. | | |

# Performance Goals

## Process / Performance Goals and Standards Introduction

Information and technology literacy skills empower the students to know how knowledge is organized, how to locate information, and how to evaluate and use the information in a way in which it can be communicated to others.

The committee developed each sentence that follows the process to explain the outlined information found in the Component Checklist.



# PROCESS / PERFORMANCE STANDARDS : GOAL 1

Students need certain information and technology literacy skills. The Show-Me Standards support required knowledge and processes of information and technology skills within the four performance goals.

**Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.**

*Students will demonstrate within and integrate across all content areas the ability to*

1.1 develop questions and ideas to initiate and refine research.

***PROCESS : Determine purpose***

Students will determine information need by stating the purpose, exploring options, and defining a manageable focus.

1.2 conduct research to answer questions and evaluate information and ideas.

***PROCESS : Access leisure and information resources***

Students will consider a variety of resources and their location.

Students will examine a variety of print and non-print resources.

Students will utilize the layout and organization of material (preface /forward / introduction, table of contents, index, glossary, charts / graphs / illustrations, tutorials / users guides, bibliography / additional resource lists, screen prompts / instructions.

Students will consider copyright and timeliness, source of information (primary and secondary), reliability and authority, diversity (multiculturalism, etc.), bias and prejudice, fact and opinion, and depth of coverage in evaluating information and ideas.

1.3 design and conduct field and laboratory investigations to study nature and society.

***PROCESS : Independent learning***

Students will design, develop, and evaluate information products and solutions related to personal interests.

1.4 use technological tools and other resources to locate, select and organize information.

***PROCESS : Access leisure and information resources.***

Students will use online electronic catalogs, electronic databases, the Internet, laser disks, CD-ROMs, computer software, electronic mail (e-mail), compact disks, videos tapes, filmstrips, audio recordings, and virtual reality.

Students will use word processors, databases, spreadsheets, graphing software and graphing calculators to organize information.

Students will use interviews, diaries, letters, memoirs.

1.5 comprehend and evaluate written, visual and oral presentations and works.

***PROCESS : Extract and organize***

Students will extract and organize information by such methods as skimming and reading, outlining, webbing / classifying / prioritizing, taking notes, paraphrasing and summarizing, and citing sources.

***PROCESS : Evaluate student process and product***

Students will evaluate the research process and the final product through self and peer evaluation.

***PROCESS : Extract and organize***

Students will derive meaning from information presented in a variety of formats.

***PROCESS : Access leisure / information resources***

Students are competent and self-motivated readers.

1.6 discover and evaluate patterns and relationships in information, ideas and structures.

***PROCESS : Access leisure and information resources***

Students will apply patterns of the alphabetically and numerically organization of materials (encyclopedia arrangement, materials on library shelves, etc.).

***PROCESS : Pattern and relationship of layout/organization***

Students will recognize the patterns and relationships of resource layout such as preface / forward / introduction, table of contents, index, glossary, charts / graphs / illustrations, tutorials / users' guides, bibliography / additional resource lists, and screen prompts.

1.7 evaluate the accuracy of information and the reliability of its sources

***PROCESS : Evaluation and selection***

Students will evaluate information based on copyright and timeliness, source of information (primary or secondary), reliability /authority, diversity (multiculturalism, etc.), bias / prejudice, fact and opinion, and depth of coverage in evaluating information and ideas.

Students will apply these evaluation criteria to a variety of formats (print, nonprint, electronic such as Internet, etc.).

1.8 organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation.

***PROCESS : Extract and organize***

Students will extract and organize information by such methods as skimming and reading, outlining, webbing, classifying, prioritizing, taking notes, paraphrasing, summarizing, and citing sources.

***PROCESS : Determine presentation method***

Students will develop an appropriate presentation method such as a poster, multimedia product, mobile, spreadsheet, database, timeline, flowchart, role play, character portrayal, portfolio, etc.

***PROCESS : Independent learning***

Students will develop creative products in a variety of formats.

1.9 identify, analyze and compare the institutions, traditions and art forms of past and present societies.

***PROCESS : Social responsibility***

Students will seek information from diverse sources, contexts, disciplines, and cultures.

1.10 apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers.

***PROCESS : Independent learning***

Students will design, develop, and evaluate information products and solutions related to personal interests.

# PROCESS / PERFORMANCE STANDARDS : GOAL 2

**Students in Missouri public schools will acquire the knowledge and skills to communicate effectively within and beyond the classroom.**

*Students will demonstrate within and integrate across all content areas the ability to*

2.1 plan and make written, oral and visual presentations for a variety of purposes and audiences.

***PROCESS : Determine presentation method***

Students will develop an appropriate presentation method such as a poster, multimedia product, spreadsheet, database, mobile, timeline, flowchart, role play, character portrayal, portfolio, etc.

***PROCESS : Communicate***

Students will utilize the tools to efficiently write / create, revise / edit, and present the completed product. Technological tools might include word processor editing features, grammar and spell checks, a camcorder, presentation software, digital cameras, and video / audio editing equipment.

2.2 review and revise communications to improve accuracy and clarity

***PROCESS : Communicate***

Students will perfect the product with communication techniques (technical writing skills) such as, bullets, fonts, graphics, and will improve accuracy with editing devices such as grammar and spell checks, and video / audio editing equipment.

2.3 exchange information, questions and ideas while recognizing the perspectives of others.

***PROCESS : Sources of information***

Students will evaluate information based on copyright and timeliness, source of information (primary or secondary), reliability and authority, diversity (multiculturalism, etc.), bias / prejudice, fact and opinion, and depth of coverage in evaluating information and ideas.

Students will apply these evaluation criteria to a variety of formats (print, nonprint, electronic such as Internet, etc.).

***PROCESS : Communicate***

Students will communicate or exchange information and ideas through such methods as web pages, video conferencing, e-mail, multimedia presentation software, and graphing calculators.

2.4 present perceptions and ideas regarding works of the arts, humanities and sciences.

***PROCESS : Communicate***

Students will present conclusions drawn from the information they have gathered.

***PROCESS : Independent learning***

Students will derive meaning from information presented creatively in a variety of formats.

***PROCESS : Social responsibility***

Students will seek information from diverse sources, contexts, disciplines, and cultures.

***PROCESS : Extract and organize***

Students will formulate theories, concepts, and conclusions drawn from the information they have gathered and present and justify the information.

2.5 perform or produce works in the fine and practical arts.

***PROCESS : Independent learning***

Students will develop creative products in a variety of formats.

2.6 apply communication techniques to the job search and to the workplace.

***PROCESS : Independent learning***

Students will seek information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational pursuits.

2.7 use technological tools to exchange information and ideas.

***PROCESS : Communicate***

Students will communicate or exchange information and ideas through such methods as web pages, video conferencing, e-mail, multimedia presentation software, and graphing calculators.

## PROCESS / PERFORMANCE STANDARDS : GOAL 3

The methods of research incorporate the eight (8) problem solving standards as stated in Goal 3. These could be applied to solve problems in any area of research, in any individual discipline, or on a personal level. The application of a problem solving model will prepare and empower students to be lifelong learners.

Samples of problem solving models are available in the Handbook for Library Media Centers. Please see the library media specialist in your building for assistance.

**Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.**

*Students will demonstrate within and integrate across all content areas the ability to*

3.1 identify problems and define their scope and elements.
3.2 develop and apply strategies based on ways others have prevented or solved problems.
3.3 develop and apply strategies based on one's own experience in preventing or solving problems.
3.4 evaluate the processes used in recognizing and solving problems.
3.5 reason inductively from a set of specific facts and deductively from general premises.
3.6 examine problems and proposed solutions from multiple perspectives.
3.7 evaluate the extent to which a strategy addresses the problem.
3.8 assess costs, benefits and other consequences of proposed solutions.

# PROCESS / PERFORMANCE STANDARDS : GOAL 4

**Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.**

*Students will demonstrate within and integrate across all content areas the ability to*

4.1 explain reasoning and identify information used to support decisions.

***PROCESS : Social responsibility***

Students will seek information from diverse sources, contexts, disciplines, and cultures.

***PROCESS : Extract and organize***

Students will formulate theories, concepts, and conclusions drawn from the information they have gathered and present and justify the information.

4.2 understand and apply the rights and responsibilities of citizenship in Missouri and the United States.

***PROCESS : Social responsibility***

Students will respect the principles of intellectual freedom, intellectual property rights and use information technology responsibly and following guidelines / laws such as Fair Use Guidelines for Multimedia, copyright licensing for software, dramatic works, and music, and adhering to acceptable use policies for electronic resources.

4.3 analyze the duties and responsibilities of individuals in societies.

***PROCESS : Social responsibility***

Students will share knowledge and information with others.

Students will respect others' ideas and backgrounds and acknowledge their contributions.

Students will respect the principles of intellectual freedom, intellectual property rights and use information technology responsibly and following guidelines / laws such as Fair Use Guidelines for Multimedia, copyright licensing for software, dramatic works, and music, and adhering to acceptable use policies for electronic resources.

4.4 recognize and practice honesty and integrity in academic work and in the workplace.

***PROCESS : Social responsibility***

Students will respect the principles of intellectual freedom, intellectual property rights and use information technology responsibly and following guidelines / laws such as Fair Use Guidelines for Multimedia, copyright licensing for software, dramatic works, and music, and adhering to acceptable use policies for electronic resources.

4.5 develop, monitor and revise plans of action to meet deadlines and accomplish goals.

***PROCESS : Social responsibility***

Students will demonstrate responsibility by adhering to library media center policies and procedures (timely return of materials, etc.).

4.6 identify tasks that require a coordinated effort and work with others to complete those tasks.

***PROCESS : Social responsibility***

Students will collaborate with others, both in person and through technology, to identify information problems and to seek their solution.

4.7 identify and apply practices that preserve and enhance the safety and health of self and others.

***PROCESS : Independent learning***

Students will seek information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational pursuits.

4.8 explore, prepare for and seek educational and job opportunities.

***PROCESS : Independent learning***

Students will seek information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational pursuits.

# Skills

# Matrix

## SKILLS MATRIX INTRODUCTION

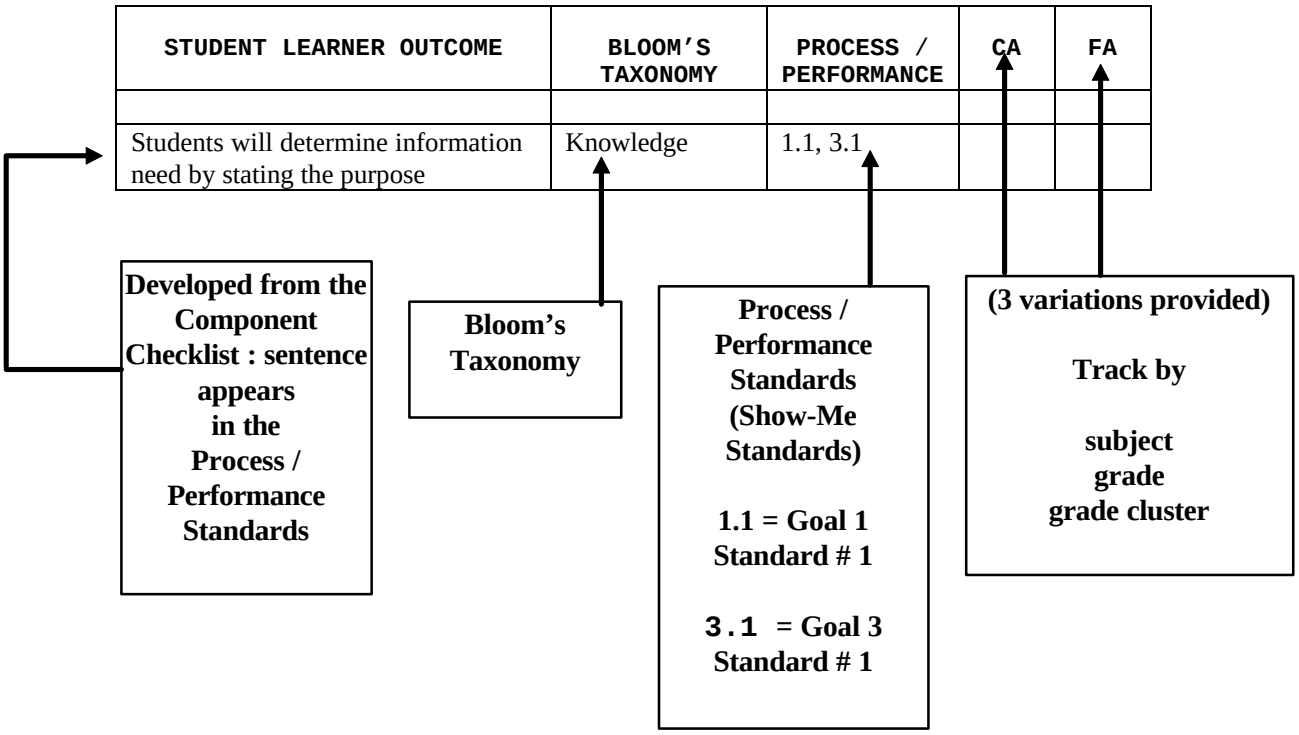
These **skills are not meant to be taught as an isolated curriculum** but are strands to be integrated throughout the school's curriculum.

Indicator 10.1 C of the Missouri School Improvement Program (MSIP), "The library media staff, in *partnership* with the faculty, teaches information literacy skills or integrates these skills across the curriculum, as outlined either in a written library skills guide or in other appropriate written curriculum guides."

The Information and Technology Literacy matrix provides the framework for a district or Library Media Center program to chart and analyze minimal or basic skills as they relate to the Show-Me Standards and the district's curriculum. A correlation to Bloom's Taxonomy has been included for information.

**Three variations of the chart are provided in this section**. The charts may be expanded in different ways depending upon the need of the district or LMC program. The grid could be used to identify the Content / Knowledge areas in which the skills are taught, such as mathematics (MA), communication arts (CA), science (SC), etc.

If more specific skills were required, the grid could be used to break the skills into smaller, more specific pieces or the grade level course. If individual grade levels are not needed, the Library Media Specialist could combine or cluster grades.



# SKILLS MATRIX

# BY

# SUBJECT AREA

# (first variation)

| STUDENT LEARNER OUTCOME | BLOOMS TAXONOMY | PERFORMANCE | CA | FA | HP | MA | SC | SS |
|---|---|---|---|---|---|---|---|---|
| Students will determine information need by stating the purpose. | Knowledge | 1.1, 3.1 | | | | | | |
| Students will consider and locate a variety of resources (print and nonprint). | Knowledge | 1.2 | | | | | | |
| Students will apply evaluation criteria to a variety of formats (print, nonprint, electronic). | Application | 1.2, 1.7, 3.6 | | | | | | |
| Students will consider copyright and timeliness, source of information (primary and secondary), reliability and authority, diversity (multiculturalism), bias and prejudice, fact and opinion, and depth of coverage in evaluating information and ideas. | Application | 1.2, 1.7, 3.6 | | | | | | |
| Students will use technological tools such as online electronic catalogs, electronic databases, Internet, laser disks, CD-ROM's, computer software, electronic mail (e-mail), compact disks, video tapes, filmstrips, audio recordings, and virtual reality. | Application | 1.4 | | | | | | |
| Students will derive meaning from information presented in a variety of formats | Comprehension / Understanding | 1.5 | | | | | | |
| Students are competent and self-motivated readers. | Evaluation | 1.5, 1.10 | | | | | | |
| Students will evaluate the research process and the final product through self and peer evaluation. | Evaluation | 1.5, 3.4, 3.7, 3.8, 4.1 | | | | | | |

| STUDENT LEARNER OUTCOME | BLOOMS TAXONOMY | PERFORMANCE | CA | FA | HP | MA | SC | SS |
|---|---|---|---|---|---|---|---|---|
| Students will recognize the patterns and relationships such as preface / forward / introduction, table of contents, index, glossary, charts / graphs / illustrations, tutorials / users' guides, bibliographies, and screen prompts. | Comprehension / Understanding | 1.6 | | | | | | |
| Students will analyze their audience and develop an appropriate presentation method such as a poster, multimedia product, mobile, spreadsheet, database, timeline, flowchart, role play, character portrayal, portfolio, etc. | Analysis | 1.8 | | | | | | |
| Students will extract and organize information by such methods as skimming and reading, outlining / webbing / classifying / prioritizing, taking notes, paraphrasing / summarizing , and citing sources. | Analysis | 1.8 | | | | | | |
| Students will develop creative products in a variety of formats. | Synthesis | 1.8, 2.5 | | | | | | |
| Students will seek information from diverse sources, contexts, disciplines, and cultures. | Knowledge | 1.9, 3.6 | | | | | | |
| Students will design, develop, and evaluate information products, strategies, and solutions related to personal interests and experiences. | Evaluation | 1.10, 3.3 | | | | | | |

| STUDENT LEARNER OUTCOME | BLOOMS TAXONOMY | PERFORMANCE | CA | FA | HP | MA | SC | SS |
|---|---|---|---|---|---|---|---|---|
| Students will utilize tools to efficiently write / create, revise / edit, and present the completed product. Technological tools might include word processor editing features, databases, spreadsheets, grammar and spell checks, graphing calculators, presentation software, video and digital equipment. | Analysis | 2.1 | | | | | | |
| Students will perfect products with communication techniques (technical writing) such as bullets, fonts, graphics, and will improve accuracy with editing devices such as grammar / spell checks, video / audio editing. | Synthesis | 2.2 | | | | | | |
| Students will communicate or exchange information and ideas through such methods as web pages, video conferencing, e-mail, multimedia presentation software, and graphing calculators. | Synthesis | 2.3, 2.7 | | | | | | |
| Students will formulate theories, concepts, and conclusions drawn from the information they have gathered and present and justify the information. | Synthesis | 2.4, 3.5, 4.1 | | | | | | |

| STUDENT LEARNER OUTCOME | BLOOMS TAXONOMY | PERFORMANCE | CA | FA | HP | MA | SC | SS |
|---|---|---|---|---|---|---|---|---|
| Students will collaborate with others, both in person and through technologies, to design, develop, and evaluate (information products) and solutions. | Application | 3.2, 3.6, 3.8 | | | | | | |
| Students will collaborate with others, both in person and through technologies, to identify information problems and to seek their solution. | Application | 3.2, 3.6, 3.8, 4.6 | | | | | | |
| Students will respect others' ideas and backgrounds and acknowledge their contributions. | Comprehension / Understanding | 3.6 | | | | | | |
| Students will respect the principles of timely return of materials, intellectual freedom, property rights and uses information technology responsibly such as Fair Use Guidelines for Multimedia, copyright licensing for software, dramatic works, and music, and adhering to acceptable use policies for electronic resources. | Application | 4.2, 4.3, 4.4 | | | | | | |
| Students will seek information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational interests. | Knowledge | 4.7, 4.8 | | | | | | |

# SKILLS MATRIX

# BY

# GRADE LEVEL

## (second variation)

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Students will determine information need by stating the purpose. | Knowledge | 1.1, 3.1 | | | | | | | | | | | | | |
| Students will consider and locate a variety of resources (print and nonprint). | Knowledge | 1.2 | | | | | | | | | | | | | |
| Students will apply evaluation criteria to a variety of formats (print, nonprint, electronic). | Application | 1.2, 1.7, 3.6 | | | | | | | | | | | | | |
| Students will consider copyright and timeliness, source of information (primary and secondary), reliability and authority, diversity (multiculturalism), bias and prejudice, fact and opinion, and depth of coverage in evaluating information and ideas. | Application | 1.2, 1.7, 3.6 | | | | | | | | | | | | | |
| Students will use technological tools such as online electronic catalogs, electronic databases, Internet, laser disks, CD-ROM's, computer software, electronic mail (e-mail), compact disks, video tapes, filmstrips, audio recordings, and virtual reality. | Application | 1.4 | | | | | | | | | | | | | |
| Students will derive meaning from information presented in a variety of formats | Comprehension / Understanding | 1.5 | | | | | | | | | | | | | |
| Students are competent and self-motivated readers. | Evaluation | 1.5, 1.10 | | | | | | | | | | | | | |
| Students will evaluate the research process and the final product through self and peer evaluation. | Evaluation | 1.5, 3.4, 3.7, 3.8, 4.1 | | | | | | | | | | | | | |

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Students will recognize the patterns and relationships such as preface / forward / introduction, table of contents, index, glossary, charts / graphs / illustrations, tutorials / users' guides, bibliographies, and screen prompts. | Comprehension / Understanding | 1.6 | | | | | | | | | | | | | |
| Students will analyze their audience and develop an appropriate presentation method such as a poster, multimedia product, mobile, spreadsheet, database, timeline, flowchart, role play, character portrayal, portfolio, etc. | Analysis | 1.8 | | | | | | | | | | | | | |
| Students will extract and organize information by such methods as skimming and reading, outlining / webbing / classifying / prioritizing, taking notes, paraphrasing / summarizing , and citing sources. | Analysis | 1.8 | | | | | | | | | | | | | |
| Students will develop creative products in a variety of formats. | Synthesis | 1.8, 2.5 | | | | | | | | | | | | | |
| Students will seek information from diverse sources, contexts, disciplines, and cultures. | Knowledge | 1.9, 3.6 | | | | | | | | | | | | | |
| Students will design, develop, and evaluate information products, strategies, and solutions related to personal interests and experiences. | Evaluation | 1.10, 3.3 | | | | | | | | | | | | | |

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Students will utilize tools to efficiently write / create, revise / edit, and present the completed product. Technological tools might include word processor editing features, databases, spreadsheets, grammar and spell checks, graphing calculators, presentation software, video and digital equipment. | Analysis | 2.1 | | | | | | | | | | | | | |
| Students will perfect products with communication techniques (technical writing) such as bullets, fonts, graphics, and will improve accuracy with editing devices such as grammar / spell checks, video / audio editing. | Synthesis | 2.2 | | | | | | | | | | | | | |
| Students will communicate or exchange information and ideas through such methods as web pages, video conferencing, e-mail, multimedia presentation software, and graphing calculators. | Synthesis | 2.3, 2.7 | | | | | | | | | | | | | |
| Students will formulate theories, concepts, and conclusions drawn from the information they have gathered and present and justify the information. | Synthesis | 2.4, 3.5, 4.1 | | | | | | | | | | | | | |

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Students will collaborate with others, both in person and through technologies, to design, develop, and evaluate (information products) and solutions. | Application | 3.2, 3.6, 3.8 | | | | | | | | | | | | | |
| Students will collaborate with others, both in person and through technologies, to identify information problems and to seek their solution. | Application | 3.2, 3.6, 3.8, 4.6 | | | | | | | | | | | | | |
| Students will respect others' ideas and backgrounds and acknowledge their contributions. | Comprehension / Understanding | 3.6 | | | | | | | | | | | | | |
| Students will respect the principles of timely return of materials, intellectual freedom, property rights and uses information technology responsibly such as Fair Use Guidelines for Multimedia, copyright licensing for software, dramatic works, and music, and adhering to acceptable use policies for electronic resources. | Application | 4.2, 4.3, 4.4 | | | | | | | | | | | | | |
| Students will seek information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational interests. | Knowledge | 4.7, 4.8 | | | | | | | | | | | | | |

# SKILLS MATRIX

# BY

# GRADE CLUSTER

## (third variation)

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K-3 | 4-8 | 9-12 |
|---|---|---|---|---|---|
| Students will determine information need by stating the purpose. | Knowledge | 1.1, 3.1 | | | |
| Students will consider and locate a variety of resources (print and nonprint). | Knowledge | 1.2 | | | |
| Students will apply evaluation criteria to a variety of formats (print, nonprint, electronic). | Application | 1.2, 1.7, 3.6 | | | |
| Students will consider copyright and timeliness, source of information (primary and secondary), reliability and authority, diversity (multiculturalism), bias and prejudice, fact and opinion, and depth of coverage in evaluating information and ideas. | Application | 1.2, 1.7, 3.6 | | | |
| Students will use technological tools such as online electronic catalogs, electronic databases, Internet, laser disks, CD-ROM's, computer software, electronic mail (e-mail), compact disks, video tapes, filmstrips, audio recordings, and virtual reality. | Application | 1.4 | | | |
| Students will derive meaning from information presented in a variety of formats | Comprehension / Understanding | 1.5 | | | |
| Students are competent and self-motivated readers. | Evaluation | 1.5, 1.10 | | | |
| Students will evaluate the research process and the final product through self and peer evaluation. | Evaluation | 1.5, 3.4, 3.7, 3.8, 4.1 | | | |

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K-3 | 4-8 | 9-12 |
|---|---|---|---|---|---|
| Students will recognize the patterns and relationships such as preface / forward / introduction, table of contents, index, glossary, charts / graphs / illustrations, tutorials / users' guides, bibliographies, and screen prompts. | Comprehension / Understanding | 1.6 | | | |
| Students will analyze their audience and develop an appropriate presentation method such as a poster, multimedia product, mobile, spreadsheet, database, timeline, flowchart, role play, character portrayal, portfolio, etc. | Analysis | 1.8 | | | |
| Students will extract and organize information by such methods as skimming and reading, outlining / webbing / classifying / prioritizing, taking notes, paraphrasing / summarizing , and citing sources. | Analysis | 1.8 | | | |
| Students will develop creative products in a variety of formats. | Synthesis | 1.8, 2.5 | | | |
| Students will seek information from diverse sources, contexts, disciplines, and cultures. | Knowledge | 1.9, 3.6 | | | |
| Students will design, develop, and evaluate information products, strategies, and solutions related to personal interests and experiences. | Evaluation | 1.10, 3.3 | | | |

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K-3 | 4-8 | 9-12 |
|---|---|---|---|---|---|
| Students will utilize tools to efficiently write / create, revise / edit, and present the completed product. Technological tools might include word processor editing features, databases, spreadsheets, grammar and spell checks, graphing calculators, presentation software, video and digital equipment. | Analysis | 2.1 | | | |
| Students will perfect products with communication techniques (technical writing) such as bullets, fonts, graphics, and will improve accuracy with editing devices such as grammar / spell checks, video / audio editing. | Synthesis | 2.2 | | | |
| Students will communicate or exchange information and ideas through such methods as web pages, video conferencing, e-mail, multimedia presentation software, and graphing calculators. | Synthesis | 2.3, 2.7 | | | |
| Students will formulate theories, concepts, and conclusions drawn from the information they have gathered and present and justify the information. | Synthesis | 2.4, 3.5, 4.1 | | | |

| STUDENT LEARNER OUTCOME | BLOOM'S TAXONOMY | PERFORMANCE | K-3 | 4-8 | 9-12 |
|---|---|---|---|---|---|
| Students will collaborate with others, both in person and through technologies, to design, develop, and evaluate (information products) and solutions. | Application | 3.2, 3.6, 3.8 | | | |
| Students will collaborate with others, both in person and through technologies, to identify information problems and to seek their solution. | Application | 3.2, 3.6, 3.8, 4.6 | | | |
| Students will respect others' ideas and backgrounds and acknowledge their contributions. | Comprehension / Understanding | 3.6 | | | |
| Students will respect the principles of timely return of materials, intellectual freedom, property rights and uses information technology responsibly such as Fair Use Guidelines for Multimedia, copyright licensing for software, dramatic works, and music, and adhering to acceptable use policies for electronic resources. | Application | 4.2, 4.3, 4.4 | | | |
| Students will seek information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational interests. | Knowledge | 4.7, 4.8 | | | |

# Activities from the Curriculum Frameworks

## Content Areas Activities Introduction

Frameworks for Curriculum Development has integrated the "Show-Me Standards" with the six major content / knowledge areas: communication arts (CA), fine arts (FA), health/physical education (HP), mathematics (MA), science (SC), and social studies (SS). Included in each of these areas is a list of sample learning activities that may be used to teach the various knowledge and performance skills. **Many of the learning activities lend themselves to a cooperative instructional partnership between the teacher and the library media specialist.** The following chosen activities are selections of learning activities from each content / knowledge area at each grade cluster. These learning activities may be used to integrate library and technology skills instruction with classroom instruction. They may include but are not limited to instruction in the use of the card / automated catalog, e-mail, the Internet, and Boolean searching the reference collection. Any of the activities may be adapted by the library media specialist and / or teacher to meet the needs and ages of the students. The library media specialist should feel free to copy any of these lists for the teachers' use. The library media specialist may also wish to consult the frameworks book for each of the content / knowledge areas to select other sample activities suitable for collaborative partnership work with the classroom teacher. A copy of the frameworks book was sent to each district superintendent. Extra copies may be created in the district by copying the original, accessing the majority of the document on the DESE web site or purchasing a copy from the Instructional Materials Lab in Columbia, Missouri.

# K-4 Activities

| COMMUNICATION ARTS | FINE ARTS | HEALTH, PHYSICAL EDUCATION |
|---|---|---|
| 1. (Gather, Analyze and Apply Information and Ideas)<br><br>Find the correct spelling of a word by using a dictionary, wall chart or spell checker or by asking a classmate or an adult. Keep an individual word list in your learning log or on a computer.<br><br>(CA1; 1.2; 1.4) | 1. (Dance-History)<br><br>Choose a culture and a time period and draw costumes that people in that culture and time might wear.<br><br>(FA5; 1.6) | 1. (Physical Activity and Lifetime Wellness)<br><br>Use computer software to gain an understanding of basic anatomy and physiology and the importance of organ systems.<br><br>(HP2,4; 1.4) |

**GRADE LEVEL CLUSTER**

**SUBJECT DIVISION**

**STRAND**

**ALL INFORMATION DIRECTLY FROM CURRICULUM FRAMEWORKS**

**ACTIVITY DETAILED**

**CONTENT / KNOWLEDGE STANDARD**

**AND / OR**

**PROCESS / PERFORMANCE STANDARD**

**CA** = Communication Arts
**FA** = Fine Arts
**HP** = Health / Physical Education
**MA** = Mathematics
**SC** = Science
**SS** = Social Studies

**CODES :**

SS 4 = Social Studies -- Standard number 4

2.1 = Goal 2 -- Standard 1

This may be used as a public relations tool with the classroom teaching staff in individual buildings.

## See a Library Media Specialist When You…

- ☑ have a seed of an idea.
- ☑ need to know if adequate resources are available (BEFORE you develop the assignment).
- ☑ need an instructional design partner.
- ☑ need curriculum support materials.
- ☑ have a recommendation for purchase.
- ☑ need a fresh outlook on an old subject.
- ☑ need instruction in the use of new technologies.
- ☑ need to find current personal and / or professional materials.
- ☑ need a great book.
- ☑ need to share infectious enthusiasm for learning.

# K-4 Activities

| COMMUNICATION ARTS | FINE ARTS | HEALTH, PHYSICAL EDUCATION |
|---|---|---|
| 1. (Gather, Analyze and Apply Information and Ideas) Find the correct spelling of a word by using a dictionary, wall chart or spell checker or by asking a classmate or an adult. Keep an individual word list in your learning log or on a computer. (CA1; 1.2; 1.4) | 1. (Dance-History) Choose a culture and a time period and draw costumes that people in that culture and time might wear. (FA5; 1.6) | 1. (Physical Activity and Lifetime Wellness) Use computer software to gain an understanding of basic anatomy and physiology and the importance of organ systems. (HP2,4; 1.4) |
| 2. (Gather, Analyze and Apply Information and Ideas) Read or listen to stories about various traditions or holidays around the world. Share your family traditions and celebrations with an e-mail pal or pen pal in another state or country. (CA7; 1.5; 1.9) | 2. (Theater-History) Research and portray a day in the life of a pilgrim, an early Roman or Greek, a slave, a Native American, etc. (FA5; 2.4) | 2. (Physical Activity and Lifetime Wellness) Use computer software to gain an understanding of basic anatomy and physiology and the importance of organ systems. (HP2,4; 1.4) |
| 3. (Gather, Analyze and Apply Information and Ideas) Make a tape of a news broadcast or write a news article that contains a different ending to a familiar story. (CA1; CA3; CA5; 1.5; 1.10) | 3. (Music-History) Plan a birthday party for one of our country's presidents, and select several songs that would be appropriate to sing at a party. (FA5; 2.4; 3.5) | 3. (Risk Assessment and Reduction) Design a Disease Flip Card Game to show cause and effect relationships, e.g., smoking and lung cancer, lack of exercise and heart disease, sun exposure and skin cancer. Summarize how early intervention and health behaviors can lead to successful management of chronic diseases such as asthma, arthritis, cancer. (HP2; 1.6) |
| 4. (Make a Decision and Act as Responsible Members of Society) Research an endangered Missouri plant or animal; write letters to persuade those who make decisions regarding the environment to use their influence to protect endangered species. (CA1; CA4; 4.1; 4.2; 4.6) | 4. (Music-History) Read about famous composers and give an oral report to the class about their careers and life in their country and time period. (FA5; 1.9; 2.4) | 4. (Functions and Interrelationships of Systems) Using the scientific processes (gathering information, organizing data, predicting, summarizing and drawing conclusions) have students study the five senses through the construction of scent boxes, use of tactile socks, 2-point discrimination, tasting parties, and a field study of the school's outdoor environment. (HP1; 1.3) |

| MATHEMATICS | SCIENCE | SOCIAL STUDIES |
|---|---|---|
| 1. (Connections) Read literature such as Anno's Counting House, Ten Black Dots, The Button Box, 117 Kings 42 Elephants, How Big is a Foot, The Door Bell Rang. (Many activities involving mathematics will arise during the reading of such books) (MA1; 1.6; .7)<br><br>2. (Discrete Mathematics) Draw a map of two routes to get from school to your home. Determine the shorter route, than talk about or write about why one way of going home is better than the other. (MA1; 2.2; 3.3; 3.4) | 1. (Earth Systems) Use globes and maps to identify major geological features. Compare Missouri's features to those in other states. (SC5.10; 3.2; 3.3)<br><br>2. (Earth Systems) Choose a natural disturbance (flood, heat wave, snow, ice storm) and identify the changes it caused and how it affected plants, animals, and humans. (SC4; 2.4; 4.1)<br><br>3. (Earth Systems) Identify areas of Missouri that store water above and below ground. (SC4; 1.3; 1.6; 2.4; 3.5)<br><br>4. (Ecology) Investigate and describe the habitat of an owl. Identify physical attributes and behaviors of the owls that enable them to survive in their environment. (SC3, SC4; 1.2; 1.5; 2.4) | 1. (How Do Individuals Relate To and Interact with Groups? Social-Cultural Perspective) Have students take a holiday like Christmas or Hanukkah or such events as birthdays or weddings and compare customs worldwide as to how these holidays or events are celebrated. (SS6; SS7; 1.10)<br><br>2. (How Do Individuals Relate To and Interact with Groups? Historical Perspective) Collect historical fiction to make a lending library that helps students see the everyday comparisons of then and now. Have students check out books and advertise their favorite books by making bookmarks. (SS2; SS6; SS7; 1.9)<br><br>3. (How Do Individuals Relate To and Interact with Groups? Geographic Perspective) Make a quilt (cloth or paper, etc.) of the states in different *regions* of the United Sates. Place symbols in each state representing major aspects of the state's physical geography or culture.(SS5; SS6; SS7; 1.1)<br><br>4. (How Do Events & Developments in this and Other Places Relate to Us and to Each Other? Geographic Perspective) 5. Have students make an animal atlas of the world in which they draw on maps the animals that are characteristic of different regions of the various continents. Draw conclusions about animal adaptations and habitat conditions, perhaps indicating which animals are endangered species. (students might also be asked to make "house atlases.") (SS5; 1.6) |

# 5-8 Activities

| COMMUNICATION ARTS | FINE ARTS | HEALTH, PHYSICAL EDUCATION |
|---|---|---|
| 1. (Gather, Analyze and Apply Information and Ideas) Research the life, personality and achievements of a favorite author or historical or contemporary figure. Present a dramatic monologue in character, allowing classmates to interview or ask follow-up questions as they try to figure out the mystery personality. (CA2-7; 1.1; 1.2)<br><br>2. (Gather, Analyze and Apply Information and Ideas) Create an Internet scavenger hunt on a topic with a partner. Trade with another team and practice finding information on the Internet. (CA2-7;1.1; 1.2)<br><br>3. (Gather, Analyze and Apply Information and Ideas) Create two-sided time line. On one side depict events that happened during an author's lifetime; on the other, depict the author's works. Draw conclusions about the relationship between an author's life and works. (CA7; 1.6; 1.9)<br><br>4. (Communicate Effectively Within and Beyond the Classroom) Use a computer to publish a class or neighborhood newsletter. Include such items as editorials, news stories, announcements, advertisements and cartoons. (CA1,CA4; 2.1; 2.5; 2.7; 2.2; 2.3) | 1. (Music-History) Read about several different rock performers and find recorded examples that show how their different ethnic background influenced their styles. (FA5; 1.9; 2.4; 3.3)<br><br>2. (Visual Arts-Product/Performance) Research career opportunities at the library as well as through the Internet. Report criteria for entering the market, salary, opportunities for advancement, etc. (FA1; 4; 1.4; 2.6)<br><br>3. (Visual Arts-History) Make a chart that reflects the time and amount of information retrieved by using a library vs. the Internet. Demonstrate a variety of techniques for researching information about art, artists, art events, and art history. (FA4; 5; 11; 2.1) | 1. (Personal and Family Health) Plan and produce a news documentary entitled "Lifestyles of the Healthy and Infamous" regarding behaviors that contribute to a healthy life, e.g., diet, recreation, exercise. (HP2;5; 1.17; 3.2; 3.3)<br><br>2. (Social Systems) Research how health practices can differ based on cultural influences, e.g., Asians use of meat as a side dish (less heart disease risk). (HP2; 4.1)<br><br>3. (Physical Activity and Lifetime Wellness) Identify a country and its favorite sports. Compare the level of competition to professional sports in America. Write a paper delineating differences and similarities. (HP2; 1.10)<br><br>4. (Physical Activity and Lifetime Wellness) Research a game, sport and/or dance activity representing different cultures, then lead the class in one activity, explaining the significance of the activity to that particular culture. (HP2; 1.10) |

| MATHEMATICS | SCIENCE | SOCIAL STUDIES |
|---|---|---|
| 1. (Number Sense) Explore the local forms of media to find examples of how fractions, decimals, and percents are used. Justify the appropriateness of the media's use of the numbers. (e.g., are the statistics accurate?, etc.) (MA3; 2.2; 1.7; 1.10; 4.1)<br><br>2. (Data Analysis, Probability and Statistics) Locate historical data (such as results from athletic events, annual precipitation for the county, or population) and prepare a graphic representation. Analyze the results to make predictions for the future. (MA3; 6; 1.5; 1.7; 1.8; 3.3; 3.4; 3.6) | 1. (Ecology) Analyze the human population data of a Missouri county or a city over a 100 year period. Discuss reasons for increases/decreases and the impact on the natural resources of the area.(SC4; SC8; 1.2; 1.4; 1.9; 2.1; 3.2; 3.3; 3.5; 4.1)<br><br>2. (Matter and Energy) Use weather maps and reports over an extended period of time to show the effects of uneven heating and cooling of earth's surface on weather. (SC5; 1.2; 1.6; 2.3; 2.4; 3.5; 4.6)<br><br>3. (Living Systems) Create a timeline of the appearance and disappearance of different species in the fossil record. (SC4; 1.5; 2.2)<br><br>4. (Living Systems) Use technology and resources to describe the environment in Missouri during the time period in which a given fossil was living. (SC4; 1.5; 2.2) | 1. Why Do Individuals Relate To and Interact with Groups? Civic-Political Perspective) Using a variety of sources, investigate and report on issues pertaining to how various groups have been assimilated into the American culture or rejected during different historical eras. Identify causes and consequences of the various developments found in the investigation. (SS6; SS7; 1.2; 1.3; 1.6)<br><br>2. (How Do Individuals Relate To and Interact with Groups? Historical Perspective) Using a variety of sources that go beyond standard textbooks, research holidays like Columbus Day or Thanksgiving Day to determine the accuracy of commonly held depictions of the events to which those holiday pertain. (e.g., importance of Hanukkah, correct date for Christmas, etc. (SS2; SS6; SS7; 1.7; 1.9)<br><br>(Why have People Established governance Systems? Social-Cultural perspective) Participate in newspaper and magazine scavenger hunt to find examples of the many varieties of law. (SS3; 1.3; 1.6)<br><br>(How Do the Lives of Individuals and Conditions in Society Affect each Other? Economic Perspective) Using a variety of news sources, identify recent government actions on national and state levels. Chart the probable effects of the actions on individual, family, and business economic options. (SS2; SS4; SS6; 1.4; 1.8) |

# 9-12 Activities

| COMMUNICATION ARTS | FINE ARTS | HEALTH, PHYSICAL EDUCATION |
|---|---|---|
| 1. (Communicate Effectively Within and Beyond the Classroom) Write directions for operating a simple piece of equipment; then evaluate the clarity of your directions as others attempt to follow them. (How-to-use and How-to-search-with various electronic library resources) (CA2.4; 6.7; 2.3; 2.6) | 1. (Dance-Product/Performance) Participate in an on-line discussion or newsgroup thread about dance on the Internet or using a major on-line service such as CompuServ or America On-line. (FA5; 4.1; 2.2) | 1. (Sports & Lifetime Activities) Gather a list of various professional, college, and high school mascots and identify which might be offensive for different cultural, ethnic, and gender groups. (SS6; 1.6) |
| 2. (Communicate Effectively Within and Beyond the Classroom) Establish an e-mail pen pal relationship with a student your age in another town. Find out about his or her life, town and school. Write a report on your e-mail pal, clear the draft with him or her first, then present the information to your class. (CA1; 6; 2.3; 2.7) | 2. (Visual Arts-History) Develop a visual presentation on perspective as used by 15th and 16th century Renaissance artists (such as Perugino, della Francesca, Bellini) (FA4, 5; 1.9) | 2. (Body Systems) Conduct research to examine products and practices that may enhance or inhibit healthy system functioning. Formulate a hypothesis to support one's interpretations, e.g., effect of exercise on cardiorespiratory fitness levels. (HP1, 3; 3.1; 3.2) |
| 3. (Make Decisions and Act as Responsible Members of Society) Analyze current periodicals for gender bias in advertisements and language. (CA1-7; 2.1; 2.3; 4.1; 4.3; 4.4; 4.5) | 3. (Visual Arts-History) Present a panel discussion on the themes and styles used by artists during the Reformation and Counter-Reformation in Germany, Italy, Spain, and Flanders (such as Durer, Tiepolo, El Greco). (FA4, 5; 1.9) | 3. (Risk Assessment and Reduction) Plan and create a reference booklet for a middle school safe-sitters class describing ways to handle common indoor and outdoor emergencies. (HP7; 3.2; 3.3) |
| 4. (Make Decisions and Act as Responsible Members of Society) Review sample ads from the 1940s and 1960s. Identify language and images that are not appropriate for current use. (CA1-7; 1.6; 2.3; 4.1; 4.2) | 4. (Music-History) Contact several international students via the Internet and exchange likes and dislikes of styles of music. Report to the class on their choice. (FA5; 2.4; 4.1) | 4. (Environmental Health) Collaborate with others to categorize environmental pollutants into air, land, chemicals, noise, etc. Research how each contributes to health problems and develop individual, community and government goals and a plan of action to address the problem. (SC7; 2.1; 3.2; 3.2) |

| MATHEMATICS | SCIENCE | SOCIAL STUDIES |
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| 1. (Connections) Find the Olympic gold medal times for the men's 100 meter dash and display the data in a table and scatter plot. Use a graphics calculator to calculate and display the curve of best fit. Predict the gold medal time for the year 2020. (MA6; 2.1; 1.6)<br><br>2. (Connections) Use the stock market section of the newspaper to select the stock of a company to follow. Keep track of the stock for several weeks. Make charts and graphs to display the information. Analyze the data to determine the trends for increases and decreases. Justify your analysis. (MA6; 2.1; 1.6)<br><br>3. (Discrete Mathematics) Research how the apportionment in the House of Representatives is determined. Determine how it is possible for a state to gain population by the last census and lose numbers of representatives. Illustrate the mathematics involved in the apportionment process that would allow this to happen. Write a paragraph to explain the results of your research. (MA3; 1.6; 2.2; 3.6) | 1. (Ecology) Investigate the effects of El Nino on plants and animals of the Midwest over the last 10 years. (SC4; 1.2; 1.4; 1.6; 2.3; 3.1; 3.5; 4.1)<br><br>2. (Earth Systems) Using library and Internet sources, identify and research a natural event that has affected the atmosphere and/or hydrosphere. Participate in a discussion on the Internet addressing possible actions that might reduce the effect. (SC5; 1.4; 3.2)<br><br>3. (Scientific Inquiry) After conducting a literature search on a topic, contact an expert in the field of interest by e-mail, pose questions for the expert about the historical development of the key ideas involved. Based on collected information, formulate a question for scientific research that indicates an understanding of past research and future directions. (SC7; 1.1; 1.9; 3.1; 3.4) | 1. (Why have People Established Governance Systems? Historical Perspective) Based on research into historical leaders, assume the role of one such leader and convey to an audience the leader's beliefs about the role of government in society. Optional extension: Have students dramatize hypothetical interviews with one or more leaders using a format like that on "Meet the Press." (SS6; 4.3)<br><br>2. (How Do Events & Developments in this and Other Places Relate to Us and to Each Other? Civic-Political Perspective) As a class project, plan, write and edit a newspaper or magazine for the community with a focus on historical changes and issues during some era, such as the world since 1945. As alternative ways of presenting information, show findings of the research (a) by creating a mural in the style of Thomas Hart Benton, (b) by developing a slide show or hypercard stack multi-media presentation, or (c) by creating a book jacket with an original title, subtitle, a cover design to depict a change or issue, and a fly leaf presenting synopsis of the book. (SS2; SS7; 1.2; 1.3; 1.6)<br><br>3. (How Do Events & Developments in this and Other Places Relate to Us and to Each Other? Social-Cultural Perspective) Conduct research on Supreme Court cases related to religion by examining conflicting arguments in the cases, court decisions, their consequences, and issues remaining. (SS2; SS6; SS7; 1.2; 1.3; 1.6) |